



Food to Fuel Pacific Biodiesel, Inc.

Want fries with that fill up? With PacBio Biodiesel you can. Hawaii-based Pacific Biodiesel, Inc. (PacBio) converts recycled cooking oil into fuel that powers generators, commercial equipment, vehicles, and marine vessels. Biodiesel production diverts cooking oil from landfills, while its use reduces emissions of major greenhouse gases and substances such as carbon monoxide, carbon dioxide, volatile organic compounds, hazardous diesel particulates, and the acid-rain-causing sulfur dioxide.

How It Works

Concerned about the possible negative environmental and human health impacts of restaurant grease disposal, Robert King, owner of King Diesel on Maui, Hawaii, went looking for alternatives. His search led him to Daryl Reece of the University of Idaho, who helped develop a method for converting used cooking oil to clean-burning fuel for diesel engines. In 1996, King and Reece started a small biodiesel operation at the Central Maui Landfill—PacBio. Today, PacBio is recognized by biodiesel authorities nationwide as one of the first commercially viable biodiesel plants in the United States.

The method of collecting used cooking oil varies slightly depending on location. On Maui, restaurants pay haulers to transport their used cooking oil to the landfill facility. At the landfill, haulers pay the county tipping fees of \$47 per ton of cooking oil and \$89 per ton of grease trap waste. The county then pays PacBio \$75 per ton to recycle the waste. As part of its agreement with the county, PacBio has a rent-free lease at the landfill. Since the commercial tipping fees cover most of the county's payment to PacBio, the total cost to the county is minimal. On Oahu, restaurants avoid a \$1 per gallon disposal fee by sending their waste cooking oil directly to PacBio.

What Makes PacBio Successful

Cost savings are one of the keys to PacBio's success. Converting waste cooking oil into fuel is much more cost-effective than shipping the waste off-island for disposal. Diverting these wastes also extends the life of landfills and provides a secure, local energy source.

PacBio's Maui operation recycles 80 tons of cooking oil and 375 tons of grease trap waste per month—equal to 200,000 gallons of oil and grease per year. PacBio also works closely with Maui EKO Composting (also located at the landfill) to compost leftover

solids and water, which results in a 100 percent waste diversion rate. The Oahu plant diverts 188 tons of waste cooking oil and 655 tons of grease trap waste per month. In 2000, PacBio further expanded operations by building a new plant in Honolulu that processes 25,000 gallons of grease trap waste and produces 1,500 gallons of biodiesel per day. Today, PacBio facilities are operating in Oregon, Nevada, Texas, Pennsylvania, Virginia, and Maryland.

Everyone Benefits

In addition to the county saving on disposal costs, island consumers save on fuel costs. For example, in May 2006 Biodiesel sold for \$2.84 per gallon on Maui and \$2.91 per gallon on Oahu. At this time, petroleum diesel sold for \$3.95 and \$3.65 respectively at these locations, so customers saw considerable cost savings using biodiesel.

The benefits of turning waste cooking oil into fuel extend well beyond cost savings. Diverting waste cooking oil from landfills extends its life and prevents harmful liquid waste from contaminating groundwater supplies. Biodiesel processing plants also enrich the local economy and provide a secure energy source.

Type of Recovery: Industrial Use

Company: Pacific Biodiesel, Inc.
Commercial, community-scale biodiesel producer

Web site: www.biodiesel.com

Cool Facts:



PacBio's Maui and Oahu operations divert and convert 268 tons of waste cooking oil and 1,030 tons of grease trap waste each month.